

IN THE CLAIMS:

Please amend the claims to have the status and content indicated in the following listing of claims, wherein any cancellation of claims is made *without prejudice*.

Please amend the claims as follows:

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1. (currently amended) ~~A~~ Central control unit for controlling the charging process of a battery, comprising

(a) [-] a charger circuit coupled to the battery;

(b) [-] a circuit for prohibiting said charging process when ~~predetermined conditions are met, said conditions comprise at least the condition of following conditions recited in paragraphs (i) and (ii) below are both met:~~

~~(i) [-]  $T_B > T_{max}$ , where  $T_B$  designates the actual temperature of the battery and  $T_{max}$  designates the highest permissible battery temperature, and~~

~~(ii) in addition to the condition of paragraph (i) above being met, at least one of the following three conditions of paragraph I, II or III are met:~~

~~(I) -and if the battery voltage  $U_B$  lies below a predetermined threshold value  $U_0$ .~~

~~(II) -and if the charging current  $I_{ch}$  exceeds a predetermined maximum value  $I_{max}$ , or~~

~~(III) -and an end-of-charge condition, characterized in that wherein said end-of-charge condition is generated when [the] a change of one of in either the battery current and or voltage,  $dI$  and or  $dU$ , respectively, decreases within a predetermined time period below a respective predetermined threshold level;~~

~~said prohibiting circuit comprises comprising respective conditional and final prohibition circuits, wherein said final prohibition circuit is associated with triggered by the following two of said conditions of which the first one takes place when, namely, the battery voltage  $U_B$  lies below a predetermined threshold value  $U_0$  and the second~~

condition takes place when the charging current  $I_{ch}$  exceeds a predetermined maximum value  $I_{max}$ :

    said conditional prohibition circuit being is triggered by associated with every other any one of said prohibition conditions,

    said central control circuit comprises further comprising furthermore a restart circuit for restarting the a conditionally prohibited charging process, said restart circuit comprises comprising a plurality of inputs (1 to 4) through which respective restart signals can be received, wherein a common precondition for any said restart circuit being responsive to said restart signals to trigger restart of operation of said charger circuit in response to lies in that the temperature of the battery ( $T_B$ ) is being lower than an acceptable predetermined temperature ( $T_{ok}$ ), said restart conditions are associated signals controlling with control unit operations for the same respective parameters as those constituting said conditional prohibitions, however, the actual trigger values of the restart condition lying by being separated from respective predetermined hystereses below the trigger values of the associated with conditional prohibition parameters to define a hysteresis characteristic.

2. (currently amended) The control unit as claimed in claim 1, further comprising a comparator circuit (K) monitoring the inequality  $U_B < U_o$ , and having on output coupled to a control line (L1), said semiconductor switch (T1) controlling the operation of said charger and having a control electrode connected to said control line (L1) for disconnecting the charging process if said inequality becomes true is detected.

3. (currently amended) (currently amended) The control unit as claimed in claim 1, wherein the final stop circuit comprises comprising a thyristor (Th1) having a control electrode connected to an input (12) receiving the final stop prohibition condition signal, and said final stop circuit is broken upon removal of the battery only.

4. (currently amended) The control unit as claimed in claim 1, wherein said conditional

prohibition circuit comprises thyristors (Th2 to Th5) each associated with a respective one of said conditions conditional prohibition parameters and having associated therewith anode to cathode circuitry, and the control electrodes of said thyristor being connected to prohibition inputs (6 to 11) receiving signals of said conditions, and the main circuits anode to cathode circuitry of said thyristors being coupled to the control input of a switch (R1) controlling the charging circuit (CH) to disable the same when being activated.

5. (original) The control unit as claimed in claim 6, wherein the main circuits of said thyristors (Th2 to Th5) in the conditional prohibition circuit are connected in a series with said restart circuit that comprises a pair of transistors (T4, T5) connected in a series, one being controlled by the condition  $T_B < T_{ok}$ , and the other one in the pair being controlled through an OR gate by all other conditional restart inputs (1 to 4).

6. (original) The control unit as claimed in claim 1, further comprising switches (S3), and a further thyristor (Th6), wherein the respective stop inputs of said conditional prohibition circuit being connected through said switches (S3) to the control electrode of this further thyristor (Th6), said charger circuit (CH) having a mode selector input adjusting a second charging mode with decreased charging power, and the further thyristor (Th6) when being set into conductive state enabling said second charging mode, and this conductive state being maintained till the end of the battery charging process.

7. (currently amended) The control unit as claimed in claim 1, comprising a manually operated override switch (S1) allowing the commencement of the charging process in spite of an existing final prohibition command generated because of the low level of the battery voltage to enable manual starting, whereby the low battery voltage is allowed to increase above the threshold value  $U_o$ .

8. (currently amended) The control unit as claimed in claim 1, comprising a charge power controller (SK) connected to said charging circuit (CH) to supply alternating power thereto with ~~variable flowing angle variability~~, wherein said prohibition modes said charge power controller (SK) being controlled to continuously decrease the ~~flowing angle charging rate~~, and in said charging mode the ~~flowing angle charging rate~~ is continuously increased.

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Please add new claim 9:

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9. (new) A Central control unit for controlling the charging process of a battery, comprising

- (a) a charger circuit coupled to the battery;
- (b) a circuit for prohibiting said charging process when [predetermined conditions are met, said conditions comprise] at least the following conditions recited in paragraphs (i) and (ii) below are both met:
  - (i)  $T_B > T_{max}$ , where  $T_B$  designates the actual temperature of the battery and  $T_{max}$  designates the highest permissible battery temperature, and
  - (ii) in addition to the condition of paragraph (i) above being met, at least one of the following three conditions of paragraph I, II or III are met:
    - (I) if the battery voltage  $U_B$  lies below a predetermined threshold value  $U_o$
    - (II) if the charging current  $I_{ch}$  exceeds a predetermined maximum value  $I_{max}$ , or
    - (III) an end-of-charge condition,

wherein said end-of-charge condition is generated when a change in either the battery current or voltage,  $dI$  or  $dU$ , respectively, decreases within a predetermined time period below a respective predetermined threshold level.

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